

WHAT IS CLAIMED IS:

1. A charged-particle beam writer which draws
a pattern on a specimen with a charged-particle beam
generated from a single particle generator by both of
5 a VSB (variable-shaped beam) strategy and a scan-
projection strategy, the charged-particle beam writer
comprising:

a data creating unit configured to create pattern
data representing a state where a first-type figure
10 drawn by the VSB strategy and a second-type figure
drawn by the scan-projection strategy are arranged on
the specimen;

a computing unit configured to calculate, on the
basis of the pattern data, the amount of correction for
15 correcting the drawing dimensions of the first-type
figure on the specimen and the drawing dimensions of
the second-type figure on the specimen; and

a control unit configured to control the dose of
beam at each position on the specimen on the basis of
20 the calculated amount of correction.

2. The charged-particle beam writer according to
claim 1, wherein the control unit controls the
irradiation time of the charged-particle beam for each
position on the specimen.

25 3. The charged-particle beam writer according to
claim 1, wherein

the particle generator generates as much

a charged-particle beam as corresponds to the current supplied to the particle generator, and

the control unit controls the current density of the supplied current for each position on the specimen.

5 4. The charged-particle beam writer according to claim 1, wherein the computing unit calculates the amount of correction on the basis of a pattern density distribution on the specimen.

10 5. The charged-particle beam writer according to claim 1, wherein the control unit, when there is a part of the specimen on which the first-type figure and the second-type figure overlap with each other, controls the dose of beam by the VSB strategy and the dose of beam by the scan-projection strategy separately at the
15 overlapping part.

20 6. The charged-particle beam writer according to claim 1, wherein the control unit, when multiple scanning is done by the scan-projection strategy, controls the dose of beam at each position on the specimen according to the degree of multiple of the
multiple scanning.

7. The charged-particle beam writer according to claim 1, further comprising:

25 a first shaping aperture with a rectangular aperture; and

 a second shaping aperture with a polygonal aperture and a plurality of character apertures,

wherein

a variable-shaped beam is formed by an optical overlap between the rectangular aperture and the polygonal aperture and a character beam is formed by selecting one of the character apertures.

8. The charged-particle beam writer according to claim 1, wherein a part of the second-type figure is scanned by the scan-projection strategy.

9. A charged-particle beam writer which transfers character patterns onto a specimen by a scan-projection strategy for scanning the patterns on a mask with a charge-particle beam, the charged-particle beam writer comprising:

a data creating unit configured to create pattern data representing a state where the character patterns are arranged on the specimen;

a computing unit configured to calculate, on the basis of the pattern data, the amount of correction for correcting the drawing dimensions of the character patterns on the specimen; and

a control unit configured to control the dose of beam at each position on the specimen on the basis of the calculated amount of correction.